

ABSTRACT OF THE DISCLOSURE

Methods for designing magnetic coils, particularly open gradient coils, and
5 methods and systems for using open coils for diagnostic, testing, and laboratory systems.
A method for designing coils may include characterizing an integrated current density
distribution of a coil in terms of a stream function. The stream function may be a sum of
sinusoidal functions. Parameters of the stream function may be numerically optimized to
produce a coil design of selected characteristics.

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